

CLAIMS

Claims 1-14 (Cancelled)

Claim 15 (Previously Presented) A method of controlling access of a terminal to a server, the access being controlled via a repeater, the terminal being from an outside network and the server being from an inside network, the inside network and the outside network being connected via the repeater, and the method comprising:

 permitting, via the repeater, a transmission of packets from the terminal to the server, and limiting, via the repeater, the transmission of the packets according to first conditions, the packets including authentication information;

 changing conditions limiting the transmission of the packets by generating, from the first conditions, second conditions, the conditions being changed to the second conditions when the server acknowledges a connection between the server and the terminal in which the transmission of the packets is limited according to the first conditions; and

 controlling the repeater to limit the transmission of the packets according to the second conditions,

 wherein each of the first conditions and each of the second conditions represent a bandwidth limitation of the transmission of the packets, and

 wherein the bandwidth limitation represented by each of the first conditions is narrower than the bandwidth limitation represented by the second conditions.

Claim 16 (Previously Presented) The method according to claim 15, wherein the changing of

the conditions by generating the second conditions includes changing conditions of a flow defined by (i) an address of the terminal, (ii) a port number of the terminal, (iii) an address of the server, and (iv) a port number of the server.

Claim 17 (Previously Presented) The method according to claim 15, further comprising:

storing access control information in the server;

storing the access control information in the repeater; and

when the access control information is changed by the server, notifying the repeater that the access control information has changed.

Claim 18 (Previously Presented) The method according to claim 15 further comprising:

connecting a first communication unit of the repeater to the outside network;

connecting a second communication unit of the repeater to the inside network;

storing information in a storing unit of the repeater, the stored information defining a correlation between (i) a flow of packets transmitted via the first communication unit and the second communication unit, (ii) a bandwidth threshold value of the flow, and (iii) a measured bandwidth value of the flow;

classifying, via a classifying unit of the repeater, a flow of a packet according to information stored in the storing unit defining the flow of the packet, and generating a classified flow, via the classifying unit;

measuring, via a measuring unit of the repeater, a bandwidth of the classified flow, generating, via the measuring unit, a measured value based on the measured bandwidth, and

storing the measured value within the information stored in the storing unit defining the classified flow;

comparing, via a judging unit of the repeater, the measured bandwidth of the classified flow with a bandwidth threshold value of the information in the storing unit defining the classified flow, the bandwidth threshold value of the classified flow being represented by the first conditions, and judging, via the judging unit, whether or not transmission of the classified flow is acknowledged; and

transmitting, via at least one of the first communication unit and the second communication unit, packets belonging to the acknowledged classified flow, the transmitting being limited according to the second conditions representing the bandwidth threshold value of the classified flow.

Claim 19 (Previously Presented) The method according to claim 18, further comprising setting the bandwidth threshold value of the classified flow stored in the storing unit,

wherein the bandwidth threshold value is set to a value that limits the transmission of the packets belonging to the classified flow to a narrow bandwidth, represented by the first conditions, until the server acknowledges the transmission of the classified flow, and

wherein the bandwidth threshold value is set to a value that limits the transmission of the packets belonging to the classified flow to a wide bandwidth, represented by the second conditions and being a wider bandwidth than the narrow bandwidth, once the server acknowledges the transmission of the classified flow.

Claim 20 (Previously Presented) A server connected to an inside network, the server controlling access of a terminal of an outside network to the server, the inside network and the outside network being connected via a repeater, and the server comprising:

a communication unit operable to connect to the inside network and transmit packets;

a storing unit operable to store information defining a correlation between (i) a flow of packets transmitted via the communication unit, (ii) a bandwidth threshold value of the flow, and (iii) a measured bandwidth value of the flow;

a classifying unit operable to classify a flow of a packet according to information stored in the storing unit defining the flow and operable to generate a classified flow;

a measuring unit operable to measure a bandwidth of the classified flow, operable to generate a measured value based on the measured bandwidth, and operable to store the measured value within the information in the storing unit defining the classified flow;

a judging unit operable to compare the measured bandwidth of the classified flow with a bandwidth threshold value (i) of the information in the storing unit defining classified flow and (ii) represented by a first condition, and operable to judge whether or not transmission of the classified flow is acknowledged; and

a bandwidth control unit operable to transmit packets, via the communication unit, belonging to a classified flow of which transmission is judged to be acknowledged by the judging unit,

wherein, until the server acknowledges the transmission of the classified flow, the bandwidth threshold value of the classified flow represented by the first condition is a value that limits the transmission of the packets to a first range,

wherein, once the server acknowledges the transmission of the classified flow, the bandwidth threshold value of the classified flow stored in the storing unit is changed to a value represented by a second condition that limits the transmission of the packets to a second range, and

wherein the bandwidth threshold value represented by the first condition is narrower than the bandwidth threshold value represented by the second condition.

Claim 21 (Previously Presented) A server according to claim 20, wherein, when the information stored in the storing unit is changed, the communication unit is operable to notify the repeater that the information stored in the storing unit has changed.

Claim 22 (Previously Presented) A server according to claim 20, further comprising an encryption unit operable to decode an encrypted packet,

wherein the communication unit is operable to notify the repeater of access control information concerning the encrypted packet.